

A revision of the Genera of the Sub-family Pierinæ: by
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It is now about twenty-three years since Mr. Doubleday revised this group of Butterflies in the "Genera of Diurnal Lepidoptera," in this work he recognized eighteen distinct genera, several of which he separated into sections in the belief "that at some future time they would be adopted as generic divisions."

Of the eighteen genera above mentioned only eleven have any claim to stand, viz., *Euterpe*, Swains; *Pieris*, Boiscl; (but not of Schrank, Hübner, nor Latreille); *Zegris*, Rambur; *Nathalis*, Boiscl; *Hebomoia*, Hübner; *Eronia*, Boiscl; *Callidryas*, Boiscl. and *Terias*, Swainson, (for convenience sake); *Gonepteryx*, Leach; *Colias*, Fabricius; the remainder were all previously characterized or the generic name preoccupied.

Since the publication of the "Genera" the group has been taken in hand by Messrs. Wallengren, Felder, Herrich-Schäffer, Reakirt, and Wallace, all of whom have added genera, and thus greatly facilitated the study of the sub-family.

The unwieldy genus *Pieris* has been rendered more intelligible by the labours of Messrs. Felder, Wallengren, and Wallace, but hitherto it has still remained far too large and will readily bear further sub-division; the genus *Terias* is almost in a worse condition, the little genus *Leucidia* of Herrich-Schäffer only having relieved it of two or three species.

In the following pages I hope to be enabled to advance the study of these beautiful butterflies by a careful revision of their characters and by the erection of new genera.

REVISION OF SYNONYMY.

GENUS 1. PRIONERIS. *Wallace.*

Trans. Ent. Soc. London, 4, 3rd S., pt. 3, p. 383.
(November, 1867.)

GENUS 2. DELIAS. *Hübner.*

Verz. bek. Schmett., p. 91. (1816).

Cathemia Hübn.; *Thyca*, Wllgr.

GENUS 3. PEREUTE. *Herrich-Schäffer.*

Corr. Blatt. Zool. min. Ver. Regensb. XXI., p. 105 (1867.)

GENUS 4. LEODONTA. *Butler.*

Includes *L. Dysoni*, *Tagaste*, *Tellane*, and allies.

GENUS 5. ELODINA. *Felder.*

Reise der Novara, Lep. p. 215 (1865).

GENUS 6. NYCHITONA. *Butler.*

Pontia Boisd. nec. Fabricius.

The *Pontia* of Fabricius, as Boisduval admits, was intended for the reception of the large white Butterflies, the type being *P. Cratægi*.

GENUS 7. NATHALIS. *Boisduval.*

Sp. Gén. Lep. 1, p. 589 (1836).

GENUS 8. MYLOTHRIS. *Hübner.*

Verz. bek. Schmett., p. 90 (1816).

Includes *M. Poppea*, *Rhodope*, *Agathina*, and *Trimenia*.

GENUS 9. EUTERPE. *Swainson.*

Zool. Ill. 2nd. S., pl. 74 (1831).

Restricted to the *Terça* group: the genus has been used in Botany, but I do not consider that a sufficient reason for rejecting it altogether, since it has been so long in use in Entomology.

GENUS 10. EUCHEIRA. *Westwood.*

Trans. Ent. Soc. London, 1, p. 44, pl. VI. (1839).

I only know this genus from the plate.

GENUS 11. HESPEROCHARIS. *Felder.*

Verhandl. Zool. botan. Gesellsch. Wien., p. 493 (1862).

GENUS 12. CATASTICTA. *Butler.*

Includes *C. Nimbec*, *Semiramis*, *Bithys*, *Sbenquica*, and allies.

GENUS 13. COLIAS. *Fabricius.*

Illiger's Mag., vol. 6, p. 284 (1807).

Colotis, Hübn.; *Zerene*, Hübn.

GENUS 14. LEUCIDIA. *Herrich-Schäffer.*

(Corr. Blatt. Zool. min. Ver. Regensb. XXI., p. 105 (1867).

Includes *L. Elvina*, *Brephos*, and allies, formerly in the genus *Terias*.

GENUS 15. SPHÆNOGONA. *Butler.*

Includes *S. Ectriva*, *Bogotana*, and allies, formerly in the genus *Terias*.

GENUS 16. TERIAS. *Swinson.*

Zool. Ill., 1st Ser., pl. 22 (1820).

Eurema and *Abais*, Hübn.; *Heurema*, H. Sch.

Restricted to the *Hecabe*, *Elathea*, *Sinöe*, and *Tominia* groups: I do not think it advisable to alter a name so long in general use, otherwise the genus *Abais*, Hübn. (type *A. Nicippe*) would take precedence; the name *Eurema* (type *E. Delia* Cr.) being subsequently used in Lepidoptera may be allowed to rest: I find no structural difference in *Heurema*.

GENUS 17. PYRISITIA. *Butler.*

Includes *P. Proterpia*, formerly in *Terias*.

GENUS 18. LEPTOPHOBIA. *Butler.*

Includes *L. Eleone*, *Pentica*, *Balidia*, *Arapa*, *Pylotis*, and allies, formerly placed in the genus *Pieris*.

GENUS 19. GONEPTERYX. *Leach.*

Edin. Enc. IX., p. 128 (1810).

Anteos, Hübn.

Restricted to the *Rhamni* group; the name *Anteos* is too near to *Anteon* (*Hymenoptera*).

GENUS 20. AMYNTHIA. *Swinson.*

Zool. Ill., 2nd S., pl. 65 (1832-33).

Rhodocera, Boisd.

Includes *A. Swainsonia*, *Merula*, and *Leachiana*.

A. Leachiana is the type of Dr. Boisdual's *Rhodocera*; it might form a section of *Amynthia*.

GENUS 21. *DERCAS*. *E. Doubleday.*

Gen. Diurn. Lepid., p. 70 (1847).

Rhodocera, Vollenhoven.

Includes *D. Verhuellii*, *Gobrias*, and *Wallichii*.

GENUS 22. *KRICOGONIA*. *Reakirt.*

Proc. Ent. Soc. Phil. 2, p. 355 (1863).

Includes *K. Lyside* and allies.

GENUS 23. *MEGONOSTOMA*. *Reakirt.*

Proc. Ent. Soc. Phil. 2, p. 356 (1863).

A good genus including the *Cassonia* group of the old genus *Colias*.

GENUS 24. *CALLIDRYAS*. *Boisduval.*

Lép. Am. Sept., p. 73 (1829).

Type *C. Eubule*. Linnaeus.

Murtia, *Catopsilia*, and *Phæbis*, Hübner.

Hübner previously characterized this genus under three different names, but the name *Callidryas* having been so long in use for so large and widely distributed a group I do not think it at all desirable to change it: of the names used by Hübner, *Murtia* is too close to a genus of *Crustacea*, *Catopsilia* is not unlike *Catops* and *Phæbis* is too near to *Phæbe* subsequently used in *Colcoptera*; in the latter case of course the Coleopterous name would have to be altered, but considering all things I think it best for us to retain *Callidryas*.

GENUS 25. *PTYCHOPTERYX*. *Wallengren.*

Köngl. Svensk. Vetensk.—Akad. Handl., p. 17 (1857).

Ofvers, Kongl. Vetensk.—Akad. Förhandl., p. 77 (1858) as *Thespiea*.

Dr. Felder considers this genus identical with *Teracolus* Swains., but, if I have rightly understood Dr. Wallengren's description, it is distinct.

GENUS 26. *TERACOLUS*. *Swainson.*

Zool. Ill., 1st S., pl. 115 (1833).

Aphrodite, Hübner; *Callosune*, Doubl.; *Idmais*, Boisd.; *Anthopsyche*, Willgr.

This genus will include the whole of the species hitherto referred to *Idmais* and *Callosune*; I can find no constant

character by which to separate any one group of this assemblage from another.

GENUS 27. *IXIAS*. *Hübner*.

Verz. bek. Schmett., p. 95. (1816).

Thestias, Boisd.

GENUS 28. *HEBOMOIA*. *Hübner*.

Verz. bek. Schmett., p. 95 (1816).

Iphiaus, Boisd. ; *Pieris*, Latr.

GENUS 29. *HELIOCHROMA*. *Butler*.

Cist. Ent., p. 15. (1869.)

GENUS 30. *PIERIS*. *Boisduval*.

Sp. Gén. Lép., p. 434 (1836).

Perrhybris, Hübn. ; *Pieris* and *Eronia* (part) auct.

The type of *Pieris*, Schrank, was *Parnassius Apollo*, that of Latreille and Godart was *Hebomoia Leucippe*, but since we ought to have a genus *Pieris* in the *Pierinae*, I adopt that of Boisduval, the type of which is a white butterfly from Tropical America and unfortunately not congeneric with the white European species.

GENUS 31. *APPIAS*. *Hübner*.

Verz. bek. Schmett., p. 91 (1816)

Catophaga, Hübn. ; *Tachyris*, Wallace.

GENUS 32. *PHRISSURA*. *Butler*.

At once distinguishable from *Appias* by the rounded form of the wings and different form of the disco-cellulars of frontwings.

GENUS 33. *DAPTOUNOURA*. *Butler*.

Cat. Fabr. Diurn. Lepid., p. 209 (1869).

Some of the species of this genus bear a general resemblance to males of *Appias*, as for instance *D. Isandra* to *A. Drusilla*, ♂, the position of the upper disco-cellular of the frontwings however will at once separate them.

GENUS 34. *BELENOIS*. *Hübner*.

Verz. bek. Schmett. p. 92 (1816).

Annaphæis, Hübn. ; *Pinacopteryx*, Wllgr.

Includes the *Severina* and *Calypso* groups.

GENUS 35. PONTIA. *Fabricius.*

Illiger's Mag., 6, p. 283 (1807).

Aporia, Hübn.; *Leuconea*, Donz.; *Neophasia*, Behr.

I can find no structural difference between *P. Crategi* (the type) and the *Nama* and *Judith* groups; *P. Cocytia*, *Notha*, and *Menapia* may form a section (*Neophasia*, Behr.) on account of the different form of the wings.

GENUS 36. METAPORIA. *Butler.*

Differs from the preceding in the position and length of the disco-cellulars and in the less hairy palpi.

GENUS 37. SYNCHLOË. *Hübner.*

Verz. bek. Schmett., p. 94 (1816).

This generic name has been applied to a genus of *Nymphalinae*, the latter may now take the name *Chlosyne*.

GENUS 38. TATOCHILA. *Butler.*

Allied to the preceding and to *Pontia*, but differing from *Synchloë*, in neururation, and from *Pontia* in form and palpi.

GENUS 39. HERPÆNIA. *Butler.*

Resembles an *Arge* (*Satyrinae*) in coloration: it differs from the preceding genera in the totally different disposition of the disco-cellulars in frontwing.

GENUS 40. PHULIA. *Herr-Schäffer.*

Corr. Blatt. Zool. min. Ver. Regensb. XXI., p. 105 (1867).

GENUS 41. ERONIA. *Boisduval.*

Sp. Gén. Léop., 1, p. 604 (1836).

Dryas, Willgr.

Restricted to *E. Cleodora* and the *Leda* group.

The name *Dryas* was previously used by Hübner and has subsequently been used again by Felder.

GENUS 42. NEPHERONIA. *Butler.*

Will include *N. Idotæa*, *Thalassina*, *Argia*, *Buquetii*, *Pharis*, *Chione*, and the Asiatic group *N. Hippia*, *Jobæa*, *Bæbera*, and allies.

GENUS 43. EROESSA. *Doubleday.*

Gen. Diurn. Lepid., p. 56 (1847).

The species *E. Chilensis* bears a general resemblance to

GENUS 2. DELIAS. *Hübner.*

Type *D. Egialea*. Cramer.

Frontwings less elongated than in *Prioneris*, not pointed at apex; costa not serrated: upper disco-cellular equal to lower, oblique; lower disco-cellular nearly perpendicular.

Hindwings subpyriform; cell less pointed; the upper disco-cellular being nearly in a line with the subcostal, the lower oblique.

Body more slender; antennæ with flattened club.

GENUS 3. PEREUTE. *Herrich-Schäffer.*

Type *P. Callinice*. Felder.

Form of *Delias*: upper disco-cellular of frontwings longer than lower; lower disco-cellular angulated; both oblique.

Hindwings sub-pyriform; cell simple, elongate, wedge shaped; the disco-cellulars being in an oblique line and of nearly equal length.

Body with very slender palpi and long antennæ, terminating in a flattened, strongly excavated club.

GENUS 4. LEODONTA. *Butler.*

Type *L. Dysoni*. Doubleday.

Frontwings more robust, outer margin strongly dentated especially below apex; upper disco-cellular shorter than lower, oblique; lower disco-cellular angulated, nearly perpendicular.

Hindwings with strongly waved costa and caudate projections terminating first and second median nervules; costal nervure terminating before apex; first subcostal branch arched, emitted close to second; upper disco-cellular half the length of lower and oblique; lower disco-cellular subangulate, waved, oblique; third median branch emitted near to second.

Body very hairy; palpi slender; antennæ, very long, terminating in a flattened club.

DIVISION 2. Four subcostal nervules in frontwings.

SUB-DIVISION 1. One discoidal nervure in frontwings.

GENUS 5. ELODINA. *Felder.*

Type *E. Therasia*. Felder.

Frontwings short, pointed at apex; costal nervure terminating just beyond middle of costa: first branch of sub-

costal nervure emitted some distance before end of cell, second a little beyond, third and fourth * forming a fork a short distance beyond third; discoidal nervure emitted close to subcostal reducing upper disco-cellular to a mere point; lower disco-cellular strongly arched; third median branch emitted near to second.

Hindwings pyriform; costal nervure terminating before apex; first subcostal branch arched, emitted close to second or upon a footstalk with it (*E. Signata*); upper disco-cellular half the length of lower and oblique; lower disco-cellular sub-angulate, waved, oblique; third median branch emitted near to second.

Body slender, slightly hairy; palpi and antennae short, the latter with flattened club.

GENUS 6. NYCHITONA. *Butler*.

Type *N. Dorothea*. Fabricius.

Pontia, Boisd. nec Fabr. vel Hübn.

Frontwings subpyriform, the apex rounded, first and second subcostal branches emitted far apart and generally some distance before end of cell, the second sometimes at end of cell (*N. Niobe*, *Wallace*), the third and fourth as in *Elodina*; third median branch half as near again to second as second to first.

Hindwings subtriangular; first subcostal branch arched; second some distance beyond, emitted close to discoidal nervure, reducing upper disco-cellular to a point; lower disco-cellular oblique, angulated; third median branch not far from second.

Body very slender, slightly bristly; palpi very short; antennae long, ending in a long somewhat compressed club.

GENUS 7. NATHALIS. *Boisduval*.

Type *N. Iole*. Boisduval.

Frontwings somewhat pointed, second subcostal emitted at or beyond end of cell; third and fourth branches forming a long fork to apex: disco-cellulars nearly perpendicular, arched, lower twice as long as upper; median branches near together towards end of cell.

Hindwings subpyriform; first subcostal arched, second just beyond first and near discoidal nervure; upper disco-cellular short oblique; lower long, oblique, subangulated.

* This fourth subcostal may here represent the upper discoidal of the preceding division.

Body slender, hairy; palpi long, very hairy; antennæ short, slender, with flattened club.

GENUS 8. MYLOTHRIS. *Hübner.*

Type *M. Poppea*. Cramer.

Frontwings subtriangular; first and second subcostals emitted before end of cell; upper disco-cellular oblique; lower three times the length of upper, nearly perpendicular, angulated; median branches wide apart.

Hindwings. Lower disco-cellular twice the length of upper, not angulated.

Body moderately slender, hairy; palpi long, hairy beneath; antennæ moderately long, slender, with flattened club.

SUB-DIVISION 2. Two discoidal nervures in frontwings.

GENUS 9. EUTERPE. *Swainson.*

Type *E. Terea*. Swainson. *P. Terias*. Godt.

Frontwings obovate; costal nervure terminating before apex; first subcostal branch emitted before end of cell, second just beyond, third and fourth forming a fork near apex; first discoidal nervure uniting with subcostal just beyond second branch; upper disco-cellular oblique, scarcely longer than lower which is perpendicular; median branches emitted at nearly equal distances from each other.

Hindwings pyriform; costal nervure not reaching apex, cell simple, elongate, pointed, the disco-cellulars being in a nearly continuous oblique line; the second and third median branches somewhat near together.

Body slender, slightly hairy; palpi and antennæ slender and long, the latter with flattened club.

GENUS 10. EUCHEIRA. *Westwood.*

Type *E. Socialis*. Westwood.

Frontwings. First discoidal nervure emitted near to subcostal at end of cell; upper disco-cellular very oblique.

Hindwings. Cell simple, not terminating in a long point; the upper disco-cellular being nearly in a line with subcostal, the lower nearly perpendicular. (From figures on pl. VI. of Tr. Ent. Soc., 1st S., 1).

GENUS 11. HESPEROCHARIS. *Felder.*

Type *H. Erolia*. Lucas.

Frontwings. Second subcostal branch emitted near to

apex and a long way beyond end of cell; third and fourth forming a small fork to apex; upper disco-cellular oblique; lower disco-cellular slightly arched and nearly perpendicular.

Hindwings. Costa generally slightly waved; hindwing cell simple, pointed.

Body hairy; palpi very hairy; antennæ short with scarcely flattened club.

GENUS 12. CATASTICTA. *Butler*.

Type *C. Nimbice*. Boisduval.

Frontwings. Second subcostal branch emitted at end of cell; third and fourth forming a short fork towards apex; upper discoidal springing from subcostal at some distance beyond cell.

Hindwings. Second and third median branches emitted near together.

Body hairy; palpi hairy; antennæ long, terminating in a flattened club.

GENUS 13. COLIAS. *Fabricius*.

Type *C. Palæno*. Linnaeus.

Frontwings. Second subcostal emitted at or beyond end of cell; upper discoidal as in preceding genus, lower emitted near to subcostal; upper disco-cellular short, arched; lower disco-cellular arched and sometimes biangulated.

Hindwings. Cell short somewhat wedge-shaped; upper disco-cellular short, oblique, lower long and subangulated.

Body hairy; palpi long, scarcely hairy; antennæ short; club gradually formed, not flattened.

GENUS 14. LEUCIDIA. *Herrich-Schäffer*.

Type *L. Elphos*. Felder.

Frontwings subpyriform with rounded apex; second subcostal emitted beyond end of cell; upper discoidal springing from subcostal some distance beyond cell; third median branch one third as far from second as second from first.

Hindwings subpyriform, costa slightly waved; costal nervure running to apex; first and second subcostal branches springing together in a fork upon a footstalk; disco-cellulars of nearly equal length, arched and in a continuous oblique line; second and third median branches near together.

Body very slender, scarcely hairy; palpi very short; antennæ short, slender, with gradually formed club.

GENUS 15. SPHÆNOGONA. *Butler.*

Type *S. Ectriva*. Doubleday.

Frontwings subtriangular, with slightly rounded apex; second branch of subcostal emitted close before end of cell; disco-cellulars oblique the lower twice as long as the upper and arched.

Hindwings subquadrate, the second branch of the median nervure terminating in an angle, or caudate projection (*Gratiosa*); the costal nervure very slightly excavate; first and second subcostals on a very short footstalk; upper disco-cellular one-third the length of lower, oblique; lower disco-cellular oblique, strongly arched.

Body slender, covered with short hair; palpi rather short; antennæ slender, with slightly flattened club.

GENUS 16. TERIAS. *Swainson.*

Type *T. Hecabe*. Linnæus.

Frontwings. Second subcostal emitted near end of cell, disco-cellulars nearly perpendicular and both strongly arched, the lower longer than the upper.

Hindwings rounded; first and second subcostals emitted near to each other; upper disco-cellular rather less than half as long as lower and perpendicular; lower angulated, partly perpendicular, partly oblique.

Body slender with short hair; palpi and antennæ short, the latter with narrow slightly compressed club.

GENUS 17. PYRISITIA. *Butler.*

Type *P. Proterpia*. Fabricius.

Frontwings more pointed at apex; disco-cellulars slightly arched.

Hindwings subquadrate, the outer margin exhibiting an angle between second and third median branches; first subcostal emitted at some distance before second; second subcostal and discoidal near together, reducing the upper disco-cellular to a very short oblique line; lower disco-cellular about eight times the length of upper and strongly arched.

Body as in preceding genus.

GENUS 18. LEPTOPHOBIA. *Butler*.Type *L. Eleone*. Hewitson.

Frontwings pointed at apex; second subcostal emitted close to end of cell; third and fourth subcostals forming a very minute fork close to apex; upper discoidal nervure emitted from subcostal at some distance beyond end of cell; median branches emitted at nearly equal distances from each other.

Hindwings subtriangular or rounded; upper disco-cellular very oblique, about a quarter the length of lower which is much less oblique and slightly waved.

Body hairy; palpi long, hairy; antennae long, slender, with flattened club.

GENUS 19. GONEPTERYX. *Leach*.Type *G. Rhamni*. Linnæus.

Frontwings pointed at apex, costa waved and suddenly arched to apex: outer margin excavated: second branch of subcostal emitted some distance before end of cell; third and fourth forming a fork before apex; upper disco-cellular less than half the length of lower, perpendicular; lower disco-cellular strongly arched.

Hindwings with conical caudate projection at end of second median branch; lower disco-cellular about five times the length of upper and angulated.

Body stout, hairy; palpi moderately long; antennae short, thick with gradually formed club.

GENUS 20. AMYNTHIA. *Swainson*.Type *A. Swainsonia*. Swainson.

Frontwings. Costa not waved; apex not always pointed (*A. Leachiana*); second branch of subcostal emitted before end of cell, or at the end (*A. Merula*); upper disco-cellular more than half the length of lower and oblique; median branches emitted at more nearly equal distances.

Hindwings with more or less prominent caudate projection at end of third median branch; branches of subcostal nervure and discoidal nervure at about equal distances apart at their origins: upper disco-cellular rather shorter than lower, oblique: lower disco-cellular angulated.

Body stout, less hairy.

GENUS 21. DERCAS. *Doubleday*.Type *D. Verhuellii*. Van der Hoeven.

Frontwings. Outer margin nearly straight; cell shorter and stouter; second branch of subcostal emitted just before end of cell; upper disco-cellular about one third the length of lower, perpendicular and slightly arched; lower disco-cellular strongly arched; second and third median branches emitted near together.

Hindwings with more or less caudate projection at end of third median branch; the subcostal branches and discoidal nervure emitted near together; the lower disco-cellular about four times the length of upper, and subangulated.

Body stout, rather hairy; palpi rather short; antennæ short, slender.

GENUS 22. KRICOGONIA. *Reakirt.*

Type *K. Lyside*. Godart.

Frontwings. Cell long as in *Gonepteryx*; upper disco-cellular rather shorter than lower, the two together forming an irregular arch.

Hindwings rounded; the first and second subcostal branches at some distance apart; the upper disco-cellular less than half the length of lower, the latter slightly angulated, the two together forming a continuous irregular oblique line.

Body hairy; palpi moderately long; antennæ slender.

GENUS 23. MEGONOSTOMA. *Reakirt.*

Type *M. Cæsonia*. Stoll.

Frontwings generally terminating in a sharp point at apex; neuriation as in *Gonepteryx*, excepting that the second subcostal is emitted just before the end of the cell.

Hindwings rounded; the costal nervure terminating at the middle of costa; the upper disco-cellular one third the length of lower, the latter strongly angulated, both oblique.

Body densely clothed with hair; palpi moderately long; antennæ short, rather slender with gradually formed club.

GENUS 24. CALLIDRYAS. *Boisduval.*

Type *C. Eubule*. Linnaeus.

Frontwings. Second subcostal emitted just before end of cell; upper discoidal nervure emitted from subcostal at some distance beyond cell; upper disco-cellular more than half the length of lower, oblique; lower disco-cellular strongly arched.

Hindwings rounded, generally with an impressed oval spot in the male, above basal half of subcostal nervure, for the reception of hairy patch on inner margin of frontwings; upper disco-cellular two thirds the length of lower, oblique and slightly curved: lower disco-cellular oblique, angulated; second and third median branches emitted somewhat near together.

Body densely clothed with hair; palpi and antennae rather short, the latter somewhat slender with gradually formed club.

GENUS 25. PTYCHOPTERYX. *Wallengren*.

Type *P. Bohemani*. *Wallengren*.

Frontwings, with brush of long hairs at base of inner margin in males,* first and second subcostals emitted at some distance before the end of the cell; upper discoidal nervure springing from cell and not from subcostal nervure as in preceding genera.

Hindwings. The second subcostal and discoidal nervures springing almost from the same place, so as to reduce upper disco-cellular to a point: a straight and much thickened fold runs through the cell and between discoidal and third median branches to outer margin.

Body hairy; palpi short, densely hairy beneath; antennae rather short with bluntly formed club. (Compiled from *Wallengren's* description.)

GENUS 26. TERACOLUS. *Swainson*.

Type *T. Subfasciata*. *Swainson*.

Frontwings subtriangular; first and second subcostals emitted near together and some distance before end of cell; upper discoidal nervure emitted at end of cell and close to subcostal; upper disco-cellular rather shorter than lower, the two together forming a perpendicular biangulated line; median branches at nearly equal distances apart.

Hindwings rounded; the second subcostal and discoidal nervures emitted together, reducing the upper disco-cellular to a point; lower disco-cellular long, oblique, angulated; median branches emitted at about equal distances apart.

Body clothed with short hairs; palpi and antennae longer and more slender than in preceding genera, the latter with flattened club.

* *Wallengren* says that it is at base of hindwings, but I am inclined to think this an error, in *Callidryas* it is on the frontwings.

GENUS 27. IXIAS. *Hübner.*

Type *I. Pyrene*. Cramer.

Frontwings subtriangular; neuration almost as in *Teracolus* but first discoidal nervure emitted beyond end of cell; upper disco-cellular half the length of lower, both strongly arched; also in all species except *T. Enippe*, Cr., and *Mariamne*, the second subcostal is nearer to the end of cell and the upper discoidal branches from the subcostal.

Hindwings rounded; upper disco-cellular one third or one fourth the length of lower, which is strongly angulated, both oblique.

Body covered with very short hair; palpi moderately long, rather hairy; antennæ slender with slightly compressed club.

GENUS 28. HEBOMOIA. *Hübner.*

Type *H. Glaucippe*. Linnæus.

Frontwings elongated; first and second subcostals emitted near together before end of cell; third and fourth subcostals forming a short fork before apex; first discoidal nervure springing from upper disco-cellular; upper disco-cellular rather shorter than lower, angulated and arched; lower disco-cellular strongly arched.

Hindwings. Upper disco-cellular about half the length of lower and slightly arched, lower disco-cellular waved, the two together forming an irregular oblique line: a thickened longitudinal central streak from base to outer margin as in *Ptychopteryx*.

Body robust, clothed with long straggling hairs; palpi short, bristly; antennæ moderately long, the club ill-defined, merely a thickening of the shank.

GENUS 29. HELIOCHROMA. *Butler.*

Type *H. Idiotica*. Butler.

Frontwings subtriangular; first subcostal emitted at some distance before end of cell, second at a great distance beyond and near to third and fourth which form a short fork to apex; first discoidal nervure springing from upper disco-cellular which is about two thirds the length of lower and oblique; lower disco-cellular oblique, slightly arched.

Hindwings. Upper disco-cellular rather more than half the length of lower, the two together forming a slightly

angulated oblique line; no thickened longitudinal streak, but the normal fold rather prominent.

Body moderately robust, clothed with straggling hair; (palpi moderately long but thick and broad, antennae moderately slender with gradually formed club.)*

GENUS 30. *PIERIS*. *Boisduval*.

Type *P. Amathonte*. Cramer.

Frontwings more or less elongated, subtriangular; third and fourth subcostals forming a very short fork before apex; first discoidal emitted from subcostal at some distance beyond end of cell; upper disco-cellular half the length of lower, oblique; lower disco-cellular nearly perpendicular and feebly angulated.

Hindwings subpyriform; upper disco-cellular more than half the length of lower, very oblique, the lower slightly waved, nearly perpendicular or very oblique, and almost in a line with upper: no thickened central streak as in *Hebomoia*.

Body less robust, hairy; palpi moderately long, slender, hairy beneath; antennae long, with short, gradually formed club.

This group will include *P. Amathonte*, *P. Amaryllis*, and allies, which probably represent the unmodified type of the genus.

GENUS 31. *APPIAS*. *Hübner*.

Type *A. Zelmira*. Cramer.

Frontwings subtriangular, sometimes elongated; first discoidal nervure springing from subcostal at some distance beyond cell; disco-cellulars of nearly equal length, angulated, nearly perpendicular.

Hindwings. Upper disco-cellular more than half the length of lower.

Body moderately robust, hairy; palpi long, hairy beneath; antennae long, slender with gradually formed club; abdomen of male with tuft of hair below the anal valves.

GENUS 32. *PHRISSURA*. *Butler*.

Type *P. Cynis*. Hewitson.

Frontwings. Second subcostal emitted at end of cell;

* I feel doubtful about these characters, a specimen of an allied species in Mr. Saunders's Collection has bristling palpi and slender antennae with flattened club: these characters, however, may vary as in *Nepheronia*.

upper disco-cellular about half the length of lower and strongly arched; lower disco-cellular oblique, feebly arched.

Hindwings. Upper disco-cellular nearly half the length of lower, oblique, feebly arched; lower disco-cellular less oblique, feebly arched: second and third median branches emitted rather near together.

Body moderately slender, clothed with short silky hair; palpi slender, slightly hairy beneath; antennæ short, with flattened club: abdomen of type with tuft of hair below anal valves.

GENUS 33. DAPTONOURA. *Butler.*

Type *D. Flippantha*. Fabricius.

Frontwings elongated; first and second subcostals emitted near together before end of cell; disco-cellulars of nearly equal length, the upper one very oblique, the lower perpendicular.

Hindwings. Disco-cellulars of nearly equal length.

Body rather slender, clothed with short hairs; palpi long, hairy beneath; antennæ long, slender, club impressed; abdomen of male with a pair of strong anal hooks.

GENUS 34. BELENOIS. *Hübner.*

Type *B. Calypso*. Drury.

Frontwings scarcely elongated; cell broader; lower disco-cellular oblique.

Hindwings rounded; the cell broader and shorter than in preceding genus: upper disco-cellular shorter, lower less oblique.

Body more robust, more hairy; palpi shorter, more hairy; antennæ slender with compressed club: abdomen of male with a pair of very minute anal hooks, sometimes obsolete.

GENUS 35. PONTIA. *Fabricius.*

Type *A. Uratagi*. Linnaeus.

Frontwings subtriangular or subpyriform; second subcostal emitted close to end of cell; disco-cellulars more or less oblique and varying in relative length; median branches generally emitted at nearly equal distances from each other.

Hindwings pyriform; cell more elongate than in preceding genus; disco-cellulars oblique, the upper nearly equal to lower in type (not in *Corytia*); the same also applies to the distances between median branches.

Body more slender than in *Pinacopteryx*, less hairy; palpi densely hairy; antennæ rather shorter, with compressed club: abdomen without anal hooks.

The above genus is very difficult to characterize on account of slight variations in venation between closely allied species, especially between *A. Nothia* and *A. Coxytia* (formerly referred to the genus *Euterpe*) which doubtless belong to this group.

GENUS 36. METAPORIA. *Butler*.

Type *M. Agathon*. G. R. Gray.

Frontwings subpyriform; second subcostal not so near end of cell as in *Aporia*: upper disco-cellular oblique, nearly as long as lower which is perpendicular and feebly arched; second and third median branches rather near together.

Hindwings subpyriform; the cell broader, less pointed; disco-cellulars of equal length, the upper oblique, the lower less so.

Body moderately hairy; palpi slender, hairy beneath; antennæ with distinct flattened club.

GENUS 37. SYNCHLOË. *Hübner*.

Type *S. Callidice*. Esper.

Frontwings subtriangular; upper disco-cellular about half the length of lower, oblique; lower disco-cellular angulated, nearly perpendicular.

Hindwings. Upper disco-cellular half the length of lower, oblique; lower disco-cellular much less oblique, and more or less arched.

Body hairy; palpi slender, hairy beneath; antennæ with more or less distinct flattened club.

The *Monuste* group of Tropical America with *S. Brassice* and allies will come into this genus.

GENUS 38. TATOCHILA. *Butler*.

Type *T. Autodryce*. Hübner.

Frontwings. Upper disco-cellular one third the length of lower, oblique, lower slightly arched, nearly perpendicular.

Hindwings. First subcostal very much arched, second and third just beyond and near together: upper disco-cellular about one fifth the length of lower, very oblique; lower disco-cellular less oblique and feebly angulated.

Body very hairy ; palpi slender, hairy beneath ; antennæ long, slender with well defined flattened club.

GENUS 39. *HERPÆNIA*. *Butler*.

Type *H. Tritogenia*. *Klug*.

Frontwings. First and second subcostals emitted near together at some distance before end of cell ; upper disco-cellular very short, perpendicular ; lower long, receding, arched ; second and third median branches near together.

Hindwings. First subcostal slightly arched ; upper disco-cellular about a quarter the length of lower, oblique ; lower disco-cellular nearly perpendicular, arched.

Body slender ; palpi hairy, short ; antennæ short, slender, with compressed club.

GENUS 40. *PHULIA*. *Herrich-Schäffer*.

Type *P. Nymphula*. *Gay*.

As I have had no opportunity of examining a specimen of the type, I am unable to decide upon the position of the above genus ; Dr. Herrich-Schäffer says that it is allied to *Anthocharis*, (by which I suppose he means *Euchloë*) but vein 8 is wanting, (I suppose he counts upwards as Wallengren does), in which case the missing vein would be a subcostal branch ; upper disco-cellular wanting ; the only parallel instance that I know of is in the male of *Dismorphia Medora*.

The venation is carelessly done in Gay's figure, so that nothing can be made of it.

DIVISION 3. Five subcostal nervules in frontwings.

GENUS 41. *ERONIA*. *Boisduval*.

Type *E. Cleodora*. *Hübner*.

Frontwings broad, subtriangular, with strongly arched costa ; first and second subcostals emitted near together at some distance before end of cell, the third at a great distance beyond end of cell, the fourth and fifth forming a short fork to apex : upper disco-cellular about one third the length of lower, both arched and forming a nearly perpendicular line : median branches at nearly equal distances apart.

Hindwings. Upper disco-cellular about one fourth the length of lower, oblique ; the lower disco-cellular also oblique, strongly angulated and curved ; second and third median branches rather near together.

Body robust, metathorax clothed with long silky hairs ; palpi short, densely hairy ; antennæ moderately long, rather thick, with gradually formed club.

GENUS 42. NEPHERONIA. *Butler*.

Type *N. Idotea*. Boisduval.

Frontwings occasionally subpyriform (*Pharis* and *Chione*) ; upper disco-cellular strongly excavated, more than half the length of lower which is oblique and slightly angulated.

Hindwings. Upper disco-cellular more than half the length of lower, very oblique : lower disco-cellular rather less oblique and waved ; second and third median branches wide apart.

Body moderately robust, slightly hairy ; palpi and antennæ short, the latter slender with gradually formed compressed club, sometimes flattened.

GENUS 43. EROESSA. *Doubleday*.

Type *E. Chilensis*. Guérin.

Frontwings subtriangular ; upper disco-cellular slightly excavated, more than half the length of lower which is oblique, but not angulated.

Hindwings subpyriform. Upper disco-cellular a quarter the length of lower, very oblique ; lower less oblique not waved.

Body robust, hairy : palpi very hairy ; antennæ short, slender, with flattened club.

GENUS 44. EUCHLOË. *Hübner*.

Type *E. Belia*. Cramer.

Frontwings elongate triangular, subpyriform or falcated ; second subcostal emitted at or beyond end of cell ; the fourth and fifth forming a very short fork at apex ; first discoidal emitted from subcostal beyond end of cell ; upper disco-cellular about a quarter the length of lower, nearly perpendicular ; lower strongly angulated.

Hindwings sometimes pyriform, sometimes with apex cut off obliquely ; cell elongate, pointed ; upper disco-cellular about half the length of lower and more oblique ; lower slightly angulated ; second and third median branches emitted rather near together.

Body clothed with short hair ; palpi long hairy ; antennæ short, slender, with flattened club.

GENUS 45. ZEGRIS. *Rambur.*

Type *Z. Eupheme*. Esper.

Frontwings with excavated inner margin; upper disco-cellular oblique, slanting inwards, about a quarter the length of lower which is arched.

Hindwings with apex obliquely cut off; upper disco-cellular about one-sixth the length of lower and oblique; lower strongly angulated.

Body hairy; palpi short, very hairy; antennæ short, slender, with flattened club.

GENUS 46. LEPTOSIA. *Hübner.*

Type *L. Lathyri*. Hübner.

Frontwings elongate, subtriangular, with rounded apex; the five subcostal nervures emitted beyond end of cell; first discoidal emitted from end of cell, which is very short; upper disco-cellular oblique, arched; lower straight, perpendicular.

Hindwings subpyriform; cell very short; subcostal branches emitted together on a foot-stalk; upper disco-cellular about four times as long as lower and oblique; lower disco-cellular perpendicular.

Body very slender, scarcely hairy; palpi short, slightly hairy; antennæ short, slender, with flattened club.

GENUS 47. DISMORPHIA. *Hübner.*

Type *D. Laja*. Cramer.

Frontwings elongated, sometimes falcated; the first subcostal emitted before, at, or beyond end of cell, the other four always beyond; the first discoidal emitted from end of cell which is long; upper disco-cellular very short, generally perpendicular, lower very long strongly angulated, sometimes slanting outwards and sometimes inwards.

Hindwings oblong-ovate, broader in male than female; cell elongate, nervures placed as in preceding genus.

Body long, slender; palpi very small; antennæ long with gradually formed club.

GENUS 48. MOSCHONEURA. *Butler.*

Type *M. Methymna*. Godart.

Frontwings elongate subpyriform; the five subcostals emitted beyond end of cell; first discoidal emitted a long way beyond end of cell, before, opposite to, or after the

emission of first subcostal branch; upper disco-cellular absent, lower elongated; oblique, waved.

Hindwings oblong, ovate; disco-cellulars of nearly equal length, placed at a sharp angle to each other, the lower disco-cellular being nearly in a line with median nervure.

Body as in *Dismorphia*.

TABULAR ARRANGEMENT OF GENERA.

DIVISION 1. Three subcostal nervules in frontwings.

- A. Upper disco-cellular of frontwings longer than lower. [*Prioneris*.
 * Costa of frontwings serrated in male; frontwings pointed.
 ** Costa not serrated, wings with rounded apex. *Pereute*.
- B. Upper disco-cellular of frontwings equal to lower. *Delias*.
- C. Upper disco-cellular of frontwings shorter than lower. *Leodonta*.

DIVISION 2. Four subcostal nervules in frontwings.

- A. One discoidal nervure in frontwings.
 + Upper disco-cellular of frontwings reduced to a point.
 * Subcostal branches of hindwings emitted close together. *Elodina*.
 ** Subcostal branches of hindwings emitted far apart. *Nychitona*.
 ++ Upper disco-cellular of frontwings half the length of lower. *Nathalis*.
 +++ Upper disco-cellular of frontwings one third the length of lower. *Mylothris*.
- B. Two discoidal nervures in frontwings; first discoidal nervure of frontwings uniting with subcostal.
 + Abdominal valves of males armed with powerful hooks. *Daptonoura*.
 ++ Abdominal valves of males sometimes armed with minute hooks. *Belenois*.
 +++ A tuft of hair beneath abdominal valves in males.
 * Upper disco-cellular of hindwings half the length of lower. *Phrissura*.
 ** Upper disco-cellular of hindwings more than half the length of lower. *Appias*.
 ++++ Abdominal valves simple.
 * Upper disco-cellular of frontwings scarcely longer than lower.
 a. Subcostal nervules of hindwings wide apart.
 b. Upper disco-cellular of hindwings equal to lower. *Euterpe*.
 c. Upper disco-cellular of hindwings much shorter than lower. *Pyrisitia*.
 a.a. Subcostal nervules of hindwings near together. *Terias*.
 a.a.a. Subcostal nervules of hindwings on a short footstalk. *Sphaenogona*.

- a.a.a.a. Subcostal nervules of hindwings on a long footstalk. *Leucidia*.
 ** Upper disco-cellular of frontwings rather shorter than lower. *Metaporia*.
- *** Upper disco-cellular of frontwings more than half the length of lower.
- a. A silky patch, generally hairy, beneath inner margin of frontwings in males. *Callidryas*.
- b. No patch of hairs beneath frontwings of males. *Amyntia*.
- *** Upper disco-cellular of frontwings half the length of lower.
- a. Second subcostal of frontwings emitted at end of cell. *Catantia*.
- a.a. Second subcostal of frontwings emitted before end of cell.
- b. Upper disco-cellular of hindwings one third to one fourth length of lower. *Ixias*.
- c. Upper disco-cellular of hindwings half the length of lower. *Synchlœ*.
- d. Upper disco-cellular of hindwings more than half the length of lower. *Pieris*.
- **** Upper disco-cellular of frontwings less than half the length of lower.
- a. Antennæ moderately robust with gradually formed club.
- b. Upper disco-cellular of hindwings one fifth the length of lower. *Gonepteryx*.
- c. Upper disco-cellular of hindwings less than half the length of lower. *Kricogonia*.
- d. Upper disco-cellular of hindwings one third the length of lower. *Megonostoma*.
- a.a. Antennæ long with flattened club.
- b. Palpi rather short, very hairy. *Pontia*.
- c. Palpi very long, hairy beneath. *Tatochila*.
- **** Upper disco-cellular of frontwings one third the length of lower.
- a. Second subcostal nervule of frontwings emitted at or after the end of cell. *Colias*.
- a.a. Second subcostal nervule of frontwings emitted before end of cell.
- b. Median branches of frontwings at nearly equal distances apart. *Leptophobia*.
- c. Second and third median branches of frontwings near together. *Dercas*.
- ***** Upper disco-cellular of frontwings about one sixth the length of lower. *Herpennia*.
- C. Two discoidal nervures in frontwings; first discoidal nervure of frontwings not uniting with subcostal, but emitted at end of cell.
- Upper disco-cellular of frontwings scarcely longer than lower. *Eucheira*.
- *** Upper disco-cellular of frontwings rather shorter than lower.
- a. Upper disco-cellular of hindwings reduced to a point. *Teracolus*.
- b. Upper disco-cellular of hindwings about half the length of lower. *Hebomoia*.

- *** Upper disco-cellular of frontwings more than half the length of lower.
- a. Second subcostal nervule emitted before end of cell.
Ptychopteryx.
- b. Second subcostal nervule emitted at a great distance beyond end of cell. *Heliochroma.*
- *** Upper disco-cellular of frontwings one third the length of lower. *Hesperocharis.*

DIVISION 3. Five subcostal nervules in frontwings.

- A. Second subcostal of frontwings emitted before or at end of cell.
 - * Upper disco-cellular of frontwings more than half the length of lower.
 - a. Upper disco-cellular of hindwings more than half the length of lower. *Nepheronia.*
 - b. Upper disco-cellular of hindwings a quarter the length of lower. *Eroessa.*
 - ** Upper disco-cellular of frontwings one third the length of lower. *Eronia.*
 - *** Upper disco-cellular of frontwings a quarter the length of lower. *Euchloë.*
- B. Second subcostal of frontwings emitted beyond end of cell, antennæ short.
 - * First subcostal of frontwings emitted before end of cell.
Zegris.
 - ** First subcostal of frontwings emitted after end of cell.
Leptosia.
- C. First subcostal of frontwings generally, second always emitted beyond end of cell, antennæ long.
 - * First discoidal of frontwings emitted from end of cell.
Dismorphia.
 - ** First discoidal of frontwings emitted from subcostal.
Moschoneura.

I have not inserted *Pseudopontia* in this paper, because I believe it to be a moth.

EXPLANATION OF PLATES.

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Fig.			Page.	Fig.			Page.
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